Hint 2

IMPORTANT! The next task is both a hint and an alternative to the main task. Three important points:

1. You can continue to send the solution to the main problem.
2. At any time before the final deadline, you can switch to *alternative task*. If you do this, write *a*t the very beginning of the solutionI'm moving on to an alternative task!. In this case, you get an additional coefficient of 0.7, which is multiplied by the old coefficient, and the solutions to the main problem are not checked from this point on. Be careful!
3. The task consists of several items. The penalty multiplier earned by **before** is applied to all points. In the future, each item is evaluated as a separate task. If you send a solution without any item, this item's solution is considered as Incorrect. For more information about scoring points for composite tasks, see the rules of the Cup.

Alternative Problem

In the experiments of Harkins and Brown, the masses of liquid droplets falling from the end of the pipette were measured. In the results below, ρ is the fluid density in g/cm^3, σ is the surface tension coefficient in mN/m.

For water $\rho = 0,998$g/cm^3, $\sigma = 72,80$ mN/m.

Pipette radius, mm	Drop mass, mg
2,305	68,0
3,502	98,7
3,997	111,6

For benzol $\rho = 0,880$ g/cm^3, $\sigma = 28,88$ mN/m.

Pipette radius, mm	Drop mass, mg
1,972	22,41
2,305	25,78
2,680	29,74

In another experiment, it was found that ether droplets $\rho = 0,714$g/cm^3, falling from a pipette with a radius of 1,800 mm, have a mass of 11,95 mg.

(10 points) Assuming all the experiments were carried out under the same conditions, using the dimensional analysis, determine the surface tension coefficient of the ether.